

REMARKS

Obvious errors in the specification have been corrected.

The Markush terminology in claim 50 has been corrected as requested by the Examiner and the rejection of that claim under 35 USC § 112 can now be withdrawn.

The technical problem underlying the claimed invention was to provide soft caramels in which the gelatin normally present is replaced by a non-animal substance that has properties such as low elasticity, high water dispersibility, good bodying and texturing properties, good mouthfeel and no characteristic flavor. This has been accomplished by combining a soft caramel base which contains at least one polysaccharide hydrocolloid as texturing agent, crystalline isomaltulose and a noncrystalline sweetener phase. It has been surprisingly established that in this combination, the polysaccharide hydrocolloid has properties that enable the complete replacement of gelatin as texturing agent in soft caramels while retaining the special texture and consistency of the soft caramels. Moreover, the temperature stability of crystalline isomaltulose can be insufficient. See, e.g., Nakajima, Y. and Mizutami, T. "Coloration and Other Chemical Changes in the Manufacture of Palatinose Candy", Journal of the Society for Research into Sugar Refining Techniques (1988), No. 26, pages 95 to 103 (translation of pages 1 to 15 attached: page 1, 3d paragraph states that palatinose discolors when exposed to high temperatures at high concentration; page 2, 2d paragraph states discoloration of palatinose occurs more readily than other sugars such as sucrose when heated; discoloration tendency also shown on page 3, 1st paragraph and page 4, 3d paragraph), and Cargill and Cerestar "Application for the Approval of Isomaltulose" (22nd of October 2003)(to page 62 attached; page 15, 2d paragraph shows isomaltulose was the most heat-sensitive compared to sucrose, dextrose,

fructose and trehalose). The attached documents show that crystalline isomaltulose is heat-sensitive, shown by discoloration, at temperatures over 100°C, such as used in preparation of the instant product (Example 1), and especially over 120°C used in the examples of Barrett reference. Surprisingly, the temperature stability of crystalline isomaltulose is considerably improved by stabilizing effect of the polysaccharide hydrocolloids in the claimed combination. These aspects of the invention are unexpected and unpredictable.

The rejection of claims 30-35, 38-42, 44-47 and 49 under 35 USC § 103 over Barrett in view of Takazoe or Koji is respectfully traversed.

Barrett discloses a chewy confectionary product in which gelatin has been completely replaced by oxidized starch and which contains sugar or a sugar substitute, or both. Among the substituted sugars mentioned is Isomalt. As discussed in a previous response, Isomalt and isomaltulose are very different substances. Isomaltulose is a single substance, namely the disaccharide 6-O- α -D-glucopyranosyl-D-fructose, a disaccharide and is thus a sugar, whereas Isomalt is hydrogenated isomaltulose and is a mixture of alcohols.

The Examiner is correct that there is no teaching or suggestion in any of these references of a gelatin-free soft caramel containing isomaltulose, without regard to whether it is crystalline or non-crystalline. That omission is significant in that the sweetening properties of isomaltulose had been known for at least 15 years before the Barrett application was filed. It should also be appreciated that while there is a broad teaching that various combinations can be used, there is no teaching suggesting that combining crystalline or non-crystalline sweeteners gives rise to any particular properties.

All of the examples in Barrett employ a single sweetener which is either sucrose or crystalline sucrose.

Takazoe teaches a sweetener which is a mixture of sucrose and palatinose, which mixture is "usually crystalline." There is no teaching or suggestion that combining crystalline isomaltulose with a non-crystalline sweetener, nor is there any suggestion that the temperature stability of crystalline isomaltulose can be considerably improved by stabilizing effect of the polysaccharide hydrocolloids in that combination.

The reference identified as Koji (the first name of Koji Nishio) teaches crystalline isomaltulose. It does not, however, teach or suggest combining crystalline isomaltulose with a non-crystalline sweetener, nor is there any suggestion that the temperature stability of crystalline isomaltulose can be considerably improved by stabilizing effect of the polysaccharide hydrocolloids in that combination.

The combination of the three references do not teach or suggest combining polysaccharide hydrocolloid and crystalline isomaltulose with a non-crystalline sweetener for any reason. Takazo and Koji may indicate that isomaltulose has low cariogenic properties, etc., but the sucrose substitutes listed in column 4 of Barrett also have those properties, and therefore, there would be no motivation to use isomaltulose rather than the listed sugar substitutes. There is no reason to expect isomaltulose to provide results substantially different from those listed substitutes. The combined references do not suggest that in the claimed combination, the polysaccharide hydrocolloids can completely replace gelatin in soft caramels while retaining its special texture and consistency, and also have a temperature stabilizing effect on crystalline isomaltulose. These aspects of the invention are unexpected, unpredictable and render the claimed combination unobvious.


The rejection of claims 36, 37, 43, 48, 50 and 61 under 35 USC § 103 over Barrett in view of Takazoe or Koji and Willibald is respectfully traversed.

The combination of Barrett, Takazoe and Koji has been discussed above, and Willibald has not been cited to overcome the deficiencies of that combination. Since those deficiencies remain, the additional reliance on Willibald cannot render these dependent claims unpatentable.

In light of the foregoing, it is respectfully submitted that this application is now in condition to be allowed and the early issuance of a Notice of Allowance is respectfully solicited.

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Respectfully submitted,

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